

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-27 (Canceled).

Claims 29-57 (Canceled).

Claim 58 (New): A water-dispersible liquid vitamin animal food additive comprising:  
a) from 10% to 60% by weight of a vitamin component selected from the group consisting of:

- (i) precursors of Vitamin A;
  - (ii) precursors of Vitamin E;
  - (iii) a mixture of precursors of Vitamin A and precursors of Vitamin E;
  - (iv) a mixture of precursors of Vitamin A and Vitamin D3;
  - (v) a mixture of precursors of Vitamin E and Vitamin D3; and
  - (vi) a mixture of precursors of Vitamin A, precursors of Vitamin E, and Vitamin D3;
- b) from 2% to 15% by weight of a C4 to C6 alkyl lactate;
- c) from 20% to 50% by weight of one or more veterinarily acceptable emulsifiers;
- d) from 1% to 15% by weight of water; and
- e) from 2% to 10% of an oil;
- wherein the flashpoint of the additive is about 200°F or greater.

Claim 59 (New): The additive of claim 58, wherein said additive further comprises from 1% to 15% by weight of a veterinarily acceptable stabilizer.

Claim 60 (New): The additive of claim 59, wherein the stabilizer is propylene glycol.

Claim 61 (New): The additive of claim 58, wherein the amount of the alkyl lactate is from 4% to 7%.

Claim 62 (New): The additive of claim 58, wherein the additive is free of a flammable alcohol.

Claim 63 (New): The additive of claim 58, wherein the ratio of b) to d) is from 1:5 to 10:1.

Claim 64 (New): The additive of claim 58, wherein the emulsifier is a non-ionic surfactant.

Claim 65 (New): The additive of claim 58, further comprising from 0.5% to 6% by weight of an antioxidant.

Claim 66 (New): The additive of claim 65, wherein the antioxidant is ethoxyquin, BHT or BHA.

Claim 67 (New): The additive of claim 66, wherein the antioxidant is ethoxyquin.

Claim 68 (New): The additive of claim 58, wherein the viscosity of the additive is from 1000 cP to 10000 cP at 0°C.

Claim 69 (New): The additive of claim 58, wherein the viscosity of the additive is from 100 cP to 2000 cP at 15°C.

Claim 70 (New): The additive of claim 58, wherein said additive disperses into water and forms a finely divided emulsion within 2 minutes when added at a ratio of additive to water of from 1 g/kg to 50 g/kg and stirred manually at a temperature of from 15°C to 25°C.

Claim 71 (New): The additive of claim 58, wherein the amount of water is from 1% to 5% by weight.

Claim 72 (New): The additive of claim 58, wherein component a) is precursors of Vitamin A.

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Claim 73 (New): The additive of claim 58, wherein component a) is precursors of Vitamin E.

Claim 74 (New): The additive of claim 58, wherein component a) comprises a precursor of Vitamin A and Vitamin D3 and the weight/weight ratio of the precursor of Vitamin A to Vitamin D3 is from 100:1 to 40:1.

Claim 75 (New): The additive of claim 72, wherein the total amount of the precursors of Vitamin A in the additive is from 15 to 50% by weight.

Claim 76 (New): The additive of claim 73, wherein the total amount of the precursors of Vitamin E in the additive is from 10 to 60% by weight.

Claim 77 (New): A water-dispersible liquid vitamin animal food additive comprising:

a) from 10% to 60% by weight of a vitamin component selected from the group

consisting of:

- (i) precursors of Vitamin A;
- (ii) precursors of Vitamin E;
- (iii) a mixture of precursors of Vitamin A and precursors of Vitamin E;
- (iv) a mixture of precursors of Vitamin A and Vitamin D3;
- (v) a mixture of precursors of Vitamin E and Vitamin D3; and
- (vi) a mixture of precursors of Vitamin A, precursors of Vitamin E, and

Vitamin D3;

b) from 3% to 15% by weight of a C1 to C3 alkyl lactate;

c) from 20% to 50% by weight of one or more veterinarily acceptable emulsifiers;

d) from 3% to 15% by weight of water; and

e) from 2% to 10% of an oil;

wherein the flashpoint of the additive is about 200°F or greater.

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Claim 78 (New): The additive of claim 77, wherein said additive further comprises from 1% to 15% by weight of a veterinarily acceptable stabilizer.

Claim 79 (New): The additive of claim 78, wherein the stabilizer is propylene glycol.

Claim 80 (New): The additive of claim 77, wherein the amount of the C1-C3 alkyl lactate is from 3% to 12%.

Claim 81 (New): The additive of claim 77, wherein the additive is free of a mono-hydroxy alcohol.

Claim 82 (New): The additive of claim 77, wherein the ratio of b) to d) is from 1:5 to 4:1.

Claim 83 (New): The additive of claim 77, wherein the emulsifier is a non-ionic surfactant.

Claim 84 (New): The additive of claim 77, further comprising from 0.5% to 6% by weight of an antioxidant.

Claim 85 (New): The additive of claim 84, wherein the antioxidant is ethoxyquin, BHT or BHA.

Claim 86 (New): The additive of claim 85, wherein the antioxidant is ethoxyquin.

Claim 87 (New): The additive of claim 77, wherein the viscosity of the additive is from 1000 cP to 10000 cP at 0°C.

Claim 88 (New): The additive of claim 77, wherein the viscosity of the additive is from 100 cP to 2000 cP at 15°C.

Claim 89 (New): The additive of claim 77, wherein said additive disperses into water and forms a finely dispersed emulsion within 2 minutes when added at a ratio of additive to water of from 1 g/kg to 50 g/kg and stirred manually at a temperature of from 15°C to 25°C.

Claim 90 (New): The additive of claim 77, wherein the amount of water is from 3% to 6% by weight.

Claim 91 (New): The additive of claim 77, wherein component a) is precursors of Vitamin A.

Claim 92 (New): The additive of claim 77, wherein component a) is precursors of Vitamin E.

Claim 93 (New): The additive of claim 77, wherein component a) comprises a precursor of Vitamin A and Vitamin D3 and the weight/weight ratio of the precursor of Vitamin A to Vitamin D3 is from 100:1 to 40:1.

Claim 94 (New): The additive of claim 91, wherein the total amount of the precursors of Vitamin A in the additive is from 15 to 50% by weight.

Claim 95 (New): The additive of claim 92, wherein the total amount of the precursors of Vitamin E in the additive is from 10% to 30% by weight.

Claim 96 (New): The additive of claim 58, further comprising a fungicide.

Claim 97 (New): The additive of claim 77, further comprising a fungicide.

Claim 98 (New): A water-dispersible liquid vitamin animal food additive comprising:

- a) from 1% to 6% by weight of Vitamin D3;
- b) from 2% to 15% by weight of a C4 to C6 alkyl lactate;
- c) from 20% to 50% by weight of one or more veterinarily acceptable emulsifiers;
- d) from 1% to 15% by weight of water; and

- e) from 5% to 30% by weight of an oil;  
wherein the flashpoint of the additive is about 200°F or greater.

Claim 99 (New): A water-dispersible liquid vitamin animal food additive comprising:

- a) from 1% to 6% by weight of Vitamin D3;
  - b) from 3% to 15% by weight of a C1 to C3 alkyl lactate;
  - c) from 20% to 50% by weight of one or more veterinarily acceptable emulsifiers;
  - d) from 1% to 15% by weight of water; and
  - e) from 5% to 30% by weight of an oil;
- wherein the flashpoint of the additive is about 200°F or greater.

Claim 100 (New): A water-dispersible liquid vitamin animal food additive comprising:

- a) from 10% to 60% by weight of a vitamin component selected from the group consisting of:
- (i) a precursor of Vitamin A;
  - (ii) a precursor of Vitamin E;
  - (iii) a mixture of a precursor of Vitamin A and a precursor of Vitamin E;
  - (iv) a mixture of a precursor of Vitamin A and Vitamin D3;
  - (v) a mixture of a precursor of Vitamin E and Vitamin D3; and
  - (vi) a mixture of a precursor of Vitamin A, a precursor of Vitamin E, and Vitamin D3;
- b) from 2% to 15% by weight of a C4 to C6 alkyl lactate;
  - c) from 20% to 50% by weight of one or more veterinarily acceptable emulsifiers;
  - d) from 1% to 15% by weight of water; and
  - e) from 2% to 10% of an oil;
- wherein the flashpoint of the additive is about 200°F or greater.

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Claim 101 (New): A water-dispersible liquid vitamin animal food additive comprising:

a) from 10% to 60% by weight of a vitamin component selected from the group consisting of:

- (i) a precursor of Vitamin A;
- (ii) a precursor of Vitamin E;
- (iii) a mixture of a precursor of Vitamin A and a precursor of Vitamin E;
- (iv) a mixture of a precursor of Vitamin A and Vitamin D3;
- (v) a mixture of a precursor of Vitamin E and Vitamin D3; and
- (vi) a mixture of a precursor of Vitamin A, a precursor of Vitamin E, and

Vitamin D3;

- b) from 3% to 15% by weight of a C1 to C3 alkyl lactate;
- c) from 20% to 50% by weight of one or more veterinarily acceptable emulsifiers;
- d) from 3% to 15% by weight of water; and
- e) from 2% to 10% of an oil;

wherein the flashpoint of the additive is about 200°F or greater.

Claim 102 (New): The additive of claim 58, wherein the precursors of Vitamin A is retinyl propionate.

Claim 103 (New): The additive of claim 100, wherein the precursor of Vitamin A is retinyl propionate.

Claim 104 (New): The additive of claim 101, wherein the precursor of Vitamin A is retinyl propionate.

Claim 105 (New): The additive of claim 58, wherein the precursors of Vitamin E is (dl) alpha tocopheryl acetate.

Claim 106 (New): The additive of claim 100, wherein the precursor of Vitamin E is (dl) alpha tocopheryl acetate.

Claim 107 (New): The additive of claim 101, wherein the precursor of Vitamin E is (dl) alpha tocopheryl acetate.

Claim 108 (New): The additive of claim 58, wherein the vitamin component is a mixture of retinyl propionate and Vitamin D3.

Claim 109 (New): The additive of claim 100, wherein the vitamin component is a mixture of retinyl propionate and Vitamin D3.

Claim 110 (New): The additive of claim 101, wherein the vitamin component is a mixture of retinyl propionate and Vitamin D3.

Claim 111 (New): The additive of claim 58, wherein the vitamin component is a mixture of retinyl propionate, Vitamin D3 and (dl) alpha tocopheryl acetate.

Claim 112 (New): The additive of claim 100, wherein the vitamin component is a mixture of retinyl propionate, Vitamin D3 and (dl) alpha tocopheryl acetate.

Claim 113 (New): The additive of claim 101, wherein the vitamin component is a mixture of retinyl propionate, Vitamin D3 and (dl) alpha tocopheryl acetate.